

Assessment

1

2

3

Strategy
Development

Implementation
Planning

[gap analysis]

This document summarizes our analysis of the gaps between “ideal” applications and the corresponding applications currently in use by the City of Annapolis. In some cases, no current application corresponding to the “ideal” exists at all. In those instances, the gap results from the complete absence of the required functionality.

The following section provides a representation of the gap analysis work sheet that explains its contents. PTI completed one work sheet for each ideal application. The remainder of this appendix contains the detailed gap analysis for each ideal application.

Application Name	
Ideal Application Description:	The description of the application from the ideal application architecture.
Benefits:	The expected benefit to be gained from the ideal application.
Existing Applications:	The name(s) of existing applications that provide functionality in this area.
Gap Analysis Summary:	<p>A description of gaps in the ability of existing application(s) to support necessary business processes. Areas investigated include:</p> <ul style="list-style-type: none"> • Functionality – The ability of existing applications to support necessary business processes • Ease of Use – Issues with regards to comprehensibility and usability of the corresponding applications • Data Sharing – The ability of the corresponding existing applications to provide flexible access to data • Standardization – The level of standardization of data formats, programming languages, and platforms of the corresponding existing applications
Overall Gap Assessment:	<p>A rating of the level of current automation support as compared to that supplied by the ideal application:</p> <ul style="list-style-type: none"> • “Minimal” indicates a well automated application • “Moderate” indicates that some gap exists • “Severe” indicates that the existing applications do not automate the function well, or that no application exists

Computer Aided Dispatch (CAD)	
Ideal Application Description:	This application provides dispatchers with access to all information resources needed to dispatch emergency response to a call. Capabilities include real-time display of apparatus and staff locations, support for voice, coordination of status messaging, call prioritization, and integration with 911 phone system. Interfaces with incident management, GIS/mapping, arrest/booking system, detective case management, restraining order, and provides location incident history.
Benefits:	Expedites dispatch of proximate units to incidents. Improves communication of key information – including incident address/status, etc. – to mobile units. Reduces average run times and radio traffic.
Existing Applications:	Thermo-Denali CAD
Gap Analysis Summary:	<p>Users find the dispatch component of the CAD system to be an effective and user-friendly system for dispatch of police personnel. This application provides all of the base dispatch functionality the City requires, but its full potential is unrealized due to a lack of mobile technology for officers.</p> <p>The vendor is currently working with the City to correct some outstanding implementation issues.</p>
Overall Gap Assessment:	<u>Moderate</u>

Computer Aided Drafting and Design (CADD)	
Ideal Application Description:	This application provides standardized computer support for electronic drafting, design, and review of engineering drawings.
Benefits:	Improved productivity, better management and control over the design process.
Existing Applications:	AutoCAD and AutoCAD Land Development Desktop
Gap Analysis Summary:	The City has chosen AutoCAD, which is a common, standard product used by the majority of building and engineering firms. Because the City does not use AutoCAD for design or redlining, and because the City does not accept digitized plans in AutoCAD format, the overall gap assessment is rated as severe.
Overall Gap Assessment:	<u>Severe</u>

Document Management	
Ideal Application Description:	This application allows for the automated control of documents, electronic or otherwise, throughout their life cycle at the City, from initial creation through final archiving and destruction. Functions include document identification and search capabilities, application of record retention rules, storage and retrieval, tracking, and version control. It interfaces with Workflow and Document Imaging.
Benefits:	Provides greater control over the production, storage, distribution, and archiving of City documents. Yields greater efficiencies in the ability to reuse information, reduces document production time, and provides improved security/access control. Reduces errors with automated version control and assures that all concerned parties have the latest approved revisions and/or releases. Reduces loss of documents, speeds retrieval of historical information.
Existing Applications:	None
Gap Analysis Summary:	N/A
Overall Gap Assessment:	<u>Severe</u>

Election Management	
Ideal Application Description:	This application supports the ability to create ballots for elections and a method to collect, tally and report votes. It includes support for delineating precinct and district boundaries, displaying precinct-level tallies of registered voters, and generating street files (street indexes) to automatically assign voters to precincts.
Benefits:	The City can save money through reduced labor costs, increase the speed and efficiency of electoral tasks, increase speed of obtaining election results, improve accuracy of election results, improve the ability to identify and prevent fraud, and improve public confidence.
Existing Applications:	The City Clerk's office has developed elaborate Word Perfect templates to tally and report election results. Voter and precinct support are not automated.
Gap Analysis Summary:	Existing voting equipment does not support automated ballot collection and tallying.
Overall Gap Assessment:	<u>Severe</u>

Financial Management	
Ideal Application Description:	This application supports the recording, management, reporting, and analysis associated with the City's assets and liabilities. It includes support of general ledger, purchasing and budget management.
Benefits:	Improves accountability and tracking of finances, provides statistical and management reporting, and centralizes fee collection reporting and control.
Existing Applications:	Therefore (FMS)
Gap Analysis Summary:	<p>The current system provides basic functionality and meets most City business needs. The application employs a character based interface and numbered menu navigation. It relies on an obsolete technical architecture.</p> <p>Lack of security hampers the City's ability to decentralize workload. The budget module does not function properly due to significant customizations. The system does not interface with other applications. The Finance department must re-enter budget and payroll information already entered by user departments into standalone, self-developed spreadsheets and databases. Interfaces to other fee and fine collection systems do not exist and therefore requires duplicate data entry.</p> <p>The procurement module, RAPID, does not provide a requisition process, requiring users to submit requisitions via paper or email.</p>
Overall Gap Assessment:	<u>Moderate</u>

Fire Records Management	
Ideal Application Description:	This application tracks information related to incident responses from the initial call-in through summarization for federal reporting. Supports standard and fire reporting codes, City-specific reporting, and internal performance measures. Collects time and staffing information through a link with CAD, and geocoding information through a link with GIS.
Benefits:	Facilitates post-incident reporting and follow-up. Supports as-needed queries and searches related to an incident for internal and external reporting purposes.
Existing Applications:	Seven user- and MIT-developed Paradox databases, and several QuattroPro spreadsheets are used for various Fire department functions (e.g., scheduling, timekeeping, inspections, call data).
Gap Analysis Summary:	The piecemeal approach to automation results in redundant data, poor information sharing, gaps in functionality, and deficiencies in management reporting.
Overall Gap Assessment:	<u>Severe</u>

Geographic Information Systems (GIS)	
Enabling Technology Description:	This enabling technology efficiently captures, stores, updates, manipulates, analyzes, and displays spatial and survey-accurate geographically referenced information, along with associated tabular data. Integrates with other systems that carry discrete data about mapped objects (engineering drawings, inspection sketches, etc.) to provide an accessible, coherent set of information about the City's mappable entities. GIS represents an enabling technology upon which applications such as Permit Management and Utilities Management can be built. Interfaces with CAD, Maintenance Management, and Permit Management.
Benefits:	Streamlines efforts to produce maps. Allows the City to view itself geographically from a single perspective. Allows utilities, public safety, planning, and development to perform their jobs more efficiently and accurately.
Existing Applications:	ArcView
Gap Analysis Summary:	The City does not have its own GIS systems, but does have read-only access to a few data layers that were developed by the State and County. County data is read-only. The GIS is not generally deployed to users, and there is no department and/or process in place to maintain and develop application layers.
Overall Gap Assessment:	<u>Severe</u>

Grant Management	
Ideal Application Description:	This application manages a grant from the initial opportunity development through award, execution, and closure. It also tracks grant beneficiaries, receipts/expenditures, and automates regulatory reporting. Includes a link to Financial Management.
Benefits:	Expedites creation of applications and facilitates efficient disbursement of funds. Tracks data necessary to ensure appropriate use of funds. Ensures compliance with regulatory agencies.
Existing Applications:	None
Gap Analysis Summary:	N/A
Overall Gap Assessment:	<u>Severe</u>

Harbor Management	
Ideal Application Description:	This application is a comprehensive tool for harbor management. The system graphically displays the harbor layout with access to underlying data; maintains slip and staff scheduling; automatically bills for moorings and slips with a link to Financial Management; manages customer accounts; and is a repository for harbor, vessel, tenant, maintenance, financial, and staff information for analysis and reporting.
Benefits:	Improves customer service, vessel/customer monitoring, overall harbor management including fee collection, staff scheduling, and management reporting.
Existing Applications:	A user developed, DOS-based fee calculation program is used to determine dockage charges, no data is collected or stored.
Gap Analysis Summary:	Minimal automation exists. There is no capability to capture data for statistics, management reporting and analysis. No integration with the Finance system exists for fee collections.
Overall Gap Assessment:	<u>Severe</u>

Human Resources/Training	
Ideal Application Description:	This application provides online processing and maintenance of employee records. It stores current and historical data related to demographics, academic and professional credentials, compensation, benefits, assignments, attendance, etc., and provides reporting on these attributes. It supports training, recruiting, labor contract negotiations, grievance tracking, regulatory compliance, safety compliance, and compliance with environmental mandates related to City employees. Allows for employees to access information about themselves and perform some transactions without the assistance of specially trained staff. Interfaces with Payroll and Financial Management.
Benefits:	Provides "one-stop-shopping" for retrieving employee data. Eliminates redundant data entry, decreasing inconsistencies among systems. Facilitates summary reporting for long-term human resources decision making. Automates the recording of an individual's training hours, licenses, and certifications. Reduces staff workload by allowing employees to review and update their own records with appropriate security.
Existing Applications:	Word Perfect (for applicant tracking); Therefore; QuattroPro, Paradox
Gap Analysis Summary:	The Therefore application is not optimized for human resource functions, with only basic personnel data needed to generate payroll. The Therefore personnel and payroll modules are not well interfaced. Data entry must be done in Finance for HR data. Data must be extracted from Therefore into spreadsheets for analysis and reporting. Federal and State reports are not available. A Paradox database is used for skills inventory and training. To compensate for the lack of HR/training functionality, the department has developed a combination of manual processes, stand alone micro-applications, and limited use of the Finance system to manage their work.
Overall Gap Assessment:	<u>Severe</u>

Incident Management	
Ideal Application Description:	This application tracks information related to incident responses from the initial call-in through summarization for management reporting and analysis (such as what if, crime patterns, accreditation reporting, etc.). Supports standard police and fire reporting codes, city-specific reporting, and internal performance measures. Collects time and staffing information through a link with CAD, and geocoding information through a link with GIS.
Benefits:	The system facilitates communication, expedites reporting, and provides access to City-wide incident information without the expense of hiring additional personnel. This is particularly useful for the multiple-shift environment.
Existing Applications:	Thermo Denali RMS
Gap Analysis Summary:	Some data is collected in the Records Management System (RMS) for incidents. Searching, tracking, and reporting is not incident specific or analytical in nature. This system is only deployed for the Police department.
Overall Gap Assessment:	<u>Severe</u>

Internet	
Enabling Technology Description:	This enabling technology allows access to a worldwide communications infrastructure for the purposes of communicating, exchanging data, and executing transactions with external entities.
Benefits:	Allows for convenient sharing of files, e-mail, and fax traffic. Cost-effective and expandable means of communicating with outside service providers, other departments, approval bodies, citizens, etc.
Existing Applications:	The City has developed an information only content web site which includes calendars of events, bus schedule, trash pickup info/schedule, election district maps, financial information, municipal code, FAQs, phone numbers, news releases, etc.
Gap Analysis Summary:	The site lacks offerings such as online fees and utility bill payment, parking permit purchasing, permit tracking, zoning lookup, etc.
Overall Gap Assessment:	<u>Moderate</u>

Intranet	
Enabling Technology Description:	This enabling technology provides for secure dissemination of information among City staff utilizing a web browser for access
Benefits:	Improved communication and workflow.
Existing Applications:	None
Gap Analysis Summary:	The City has completed guidelines, content management, and operating parameters for the Intranet. The prototype for Human Resources is up and running but not publicly announced. It currently has HR policy, employee directory, benefit information, rules and regulations, and forms.
Overall Gap Assessment:	<u>Moderate</u>

Investigation/Crime Analysis	
Ideal Application Description:	This application assists the City in managing the criminal aspects of public safety-related incidents. It maintains victim and witness information, informant data, field contacts, etc. Includes crime analysis capabilities. Also supports the assignment and transfer of detectives to cases and the monitoring of case status. May use Document Imaging to support case file maintenance and workflow routing. Receives incident information from the Emergency Dispatch application.
Benefits:	Facilitates coordination of investigation materials. Provides secure, efficient access to individual and incident records. Ensures that notes and comments remain appropriately attached to case file information without reliance on paper/manual filing. Facilitates the identification of patterns and trends in location and types of criminal activity.
Existing Applications:	Thermo Denali RMS
Gap Analysis Summary:	The RMS allows certain information collection and reporting, useful in crime analysis. Users have indicated a need for more intelligent data search capabilities.
Overall Gap Assessment:	<u>Moderate</u>

Legal Research	
Ideal Application Description:	This application provides access to LEXIS/NEXIS, Westlaw, or CD LAW legal databases. These databases provide editorially enhanced cases and statutes, rules and regulations, and legal periodicals.
Benefits:	Expedites legal research and analysis.
Existing Applications:	WestLaw
Gap Analysis Summary:	The WestLaw system is used in the in the City Law Office and meets the City's needs for good legal research tool.
Overall Gap Assessment:	<u>Minimal</u>

Management Reporting	
Ideal Application Description:	This application provides City management with a single source for critical data. It reports on key management performance measures on a regular schedule. It interfaces with most management systems, including Financial Management, CIS, and Maintenance Management.
Benefits:	Efficiently automates the generation of management information, obviating the need for time consuming custom reporting. Improves operational decision making.
Existing Applications:	None
Gap Analysis Summary:	NA
Overall Gap Assessment:	<u>Severe</u>

Parking/Facilities Management	
Ideal Application Description:	This application supports the management of every aspect a City's parking operation. It provides functionality for issuing permits, tracking citations, and applying late fees. The system also has extensive reporting capabilities.
Benefits:	Maximize safety, revenue, space efficiency, and staff utilization; gather information for statistical/management reporting.
Existing Applications:	Complus
Gap Analysis Summary:	The City has outsourced the parking ticket service (bill printing, mailing, dunning, mailing list) to Complus. Collections are done at Transportation. The system delivers monthly financial report via disk, but overall, has significant limitations (e.g., difficult to enter citation numbers, no reporting function).
Overall Gap Assessment:	<u>Severe</u>

Pavement Management	
Ideal Application Description:	This application supports the maintenance and improvement of the City's roadways. It tracks materials used and repairs made, predicts life-cycle cost based on expected usage, and produces replacement schedules.
Benefits:	Helps manage the City's investment in its roadways. Reduces the number of potholes, and thereby citizen complaints. Minimizes the traffic disruption due to road maintenance.
Existing Applications:	None
Gap Analysis Summary:	
Overall Gap Assessment:	<u>Severe</u>

Permit/Land Management	
Ideal Application Description:	This application supports the entry and tracking of permit, inspection, and code compliance data, and issues permits and licenses. It supports calculation and management of impact fees and credits, tracks information specific to specialized permit issuance such as hazardous materials and pyrotechnics, schedules inspections, and tracks results. Supports City code enforcement activities. Includes a GIS interface and a link to Financial Management for billing, cost recovery, and payment of credits. Takes advantage of GIS resources to locate properties and retrieve related information. Also supports an interface to CAD to transmit safety-related permit information to public safety response personnel. Supports coordination of permit activities among City departments.
Benefits:	Integrates and streamlines permit processing from initial application through completed construction and maintenance of facility. Provides faster permit turnaround service to customers. Improves access to records for incident response purposes. Automates inspection scheduling, makes necessary information available to other departments.
Existing Applications:	Permits are tracked using a Paradox database. Does not interface to the finance system.
Gap Analysis Summary:	The department uses a combination of manual processes and standalone micro-applications to manage their work. In essence, this area has no significant automation.
Overall Gap Assessment:	<u>Severe</u>

Personal Productivity Tools	
Ideal Application Description:	This standardized suite of desktop software tools provides word processor, spreadsheet, presentation, document publishing and exchange, scheduling, and e-mail capabilities.
Benefits:	Allows for convenient internal file sharing and communication with external sources. Serves as "shadow" application to support custom and packaged applications. Improves scheduling efficiency and coordination and generally allows City staff to focus on doing their work as opposed to how they do it.
Existing Applications:	Corel Suite
Gap Analysis Summary:	The City has standardized desktops utilizing the Corel suite of products. This product is successful for the City, although users noted some problems sharing information with citizens and other municipalities using other more common suites.
Overall Gap Assessment:	<u>Minimal</u>

Police Records Management	
Ideal Application Description:	This application tracks information related to incident responses from the initial call-in through summarization for federal reporting. Supports standard police and fire reporting codes, City-specific reporting, and internal performance measures. Collects time and staffing information through a link with CAD, and geocoding information through a link with GIS.
Benefits:	Facilitates post-incident reporting and follow-up. Supports as-needed queries and searches related to an incident for internal and external reporting purposes.
Existing Applications:	Thermo Denali
Gap Analysis Summary:	<p>Users find the records management component of the CAD system to be an effective and user-friendly system; however, the search capabilities are minimal. This application provides all of the base records management functionality the City requires, but its full potential is unrealized due to a lack of bandwidth for remote access by officers utilizing laptops.</p> <p>The vendor is currently working with the City to correct some activity display issues.</p>
Overall Gap Assessment:	<u>Moderate</u>

Project Management	
Ideal Application Description:	This application allows project managers to define, monitor, and control individual, departmental, or Citywide projects. It supports resource leveling and staff planning for proposed work as well as what-if analysis of proposed staffing changes. Additionally, it tracks the proposal, issuance, and acceptance of contracts, and monitors vendor performance during the life of the project. Includes links to Financial Management and Maintenance Management.
Benefits:	Improved project management and better project planning. Better work load planning, standardized project management methodology and work breakdown structures. It also allows the project manager to track performance versus plan, making adjustments as required to stay on time and within budget.
Existing Applications:	Microsoft Project
Gap Analysis Summary:	Although MS Project is installed at a few user desktops at the City, it is not widely used and there is no coordinated approach to project management City-wide. There is no shared database of resources that could be accessed by all those using the software, and these instances of Project are not integrated in any way.
Overall Gap Assessment:	<u>Severe</u>

Public Transportation Management	
Ideal Application Description:	<p>This application covers the full range of transit and paratransit information areas including:</p> <ul style="list-style-type: none"> ▪ Transit runcutting and scheduling ▪ Transit operations control (operator bid processing, dispatching, and timekeeping) ▪ Customer information/trip planning ▪ Paratransit scheduling/management ▪ Mobile data communications/management ▪ Geographic information systems (GIS) ▪ Fleet maintenance and inventory management ▪ Transit data collection and route analysis
Benefits:	Improved customer service, optimizes asset deployment and staff utilization.
Existing Applications:	None
Gap Analysis Summary:	N/A
Overall Gap Assessment:	<u>Severe</u>

Registration/Scheduling	
Ideal Application Description:	<p>This application supports the ability to create schedules and track registrants for the City's recreation, training, and volunteer programs. It also automates fee collection and communication with enrollees and instructors/coordinators. Includes interfaces with Internet and Financial Management. Allows Internet registration and payment.</p>
Benefits:	Increases the efficiency of administering training, volunteer, and Parks programs. Facilitates improved customer service due to time-efficient online registration. Avoids conflicts of instructors and facilities. Improves utilization rate of facilities.
Existing Applications:	None
Gap Analysis Summary:	N/A
Overall Gap Assessment:	<u>Severe</u>

(Public Safety) Staff Scheduling	
Ideal Application Description:	This application supports the needs of departments to schedule shifts, support for bargaining unit agreements, and optimization of resource usage. Supports dial-in shift scheduling, automated call-out to reserve staff, and reporting on state and federal labor requirements. Interfaces to CAD and Human Resources.
Benefits:	Fully automates staffing and reporting functions.
Existing Applications:	QuattroPro
Gap Analysis Summary:	Departments have developed a combination of manual processes and standalone spreadsheets to manage staff scheduling due to the lack of applications to support this function.
Overall Gap Assessment:	<u>Severe</u>

Traffic Modeling	
Ideal Application Description:	This application models regional traffic patterns and volumes for strategic planning purposes. Analyzes service utilization. Capabilities include communication with federal, state, and regional databases, and "what if" scenario analysis. Links with route planning and passenger/fare information applications. Interfaces with Geographic Information System (GIS).
Benefits:	Assists the City in understanding and forecasting traffic and rider ship patterns, ultimately helping the City develop better master plans.
Existing Applications:	None
Gap Analysis Summary:	N/A
Overall Gap Assessment:	<u>Severe</u>

Utility CIS	
Ideal Application Description:	This application provides a single tool for managing the City's relationship with its utility customers. Full automation of call center functionality, including queries on such information as utility billing, customer history, address history, and service history. It also allows for the easy creation of service orders and can include all utility bill generation functionality. Interfaces with Financial and Maintenance Management, as well as some utility control/monitoring systems, where appropriate. Allows customers to pay, request service changes, and review account history over the Internet.
Benefits:	Streamlines the utility customer relationship, allowing the City to more efficiently provide service and respond to customer requests. Centralizes all associated activities, providing improved response and reducing redundant tasks. Provides integration with the internet and the Financial Management System.
Existing Applications:	The "Therefore" finance system has a Utility Billing & Receivable System. The City uses this module to generate utility bills and manage the corresponding collections.
Gap Analysis Summary:	The current system is limited to the basic bill generation and collection. There is minimal customer information, service history, etc. It is not deployed beyond the Finance department. The system is not Web enabled for online bill payment and has limited management/statistical reporting capabilities.
Overall Gap Assessment:	<u>Severe</u>

Work Management	
Ideal Application Description:	This application automates management of the City's fixed assets including fleet, facilities, infrastructure and parks through their life cycle. It manages regulatory compliance, certification, and maintenance information for these assets. It generates work orders and preventive maintenance schedules and assigns personnel, equipment, and inventory to work. Provides the ability to track and analyze time, materials, and costs for all maintenance activities. Can interface with City wireless devices for dispatch, asset records, and plans/drawings. Also interfaces to the financial/payroll, inventory, and HR systems.
Benefits:	Longer asset life and reduced repair costs. Assists in planning short-term equipment replacement needs and long-term budgeting for ongoing maintenance, repair, and replacement. Ensures that equipment is tested regularly for safety and structural integrity. Assists in the scheduling of maintenance personnel. Improved tracking of costs related to ownership of various City assets.
Existing Applications:	None
Gap Analysis Summary:	N/A
Overall Gap Assessment:	<u>Severe</u>